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Enhanced Emergency Lighting:
Customer Sentiment Study

Emergency Safety Solutions, Inc. Interpretation of JD Power & Associates Quantitative Findings Study:
"Enhanced Emergency Lighting" – October 2020

Introduction:

Emergency Safety Solutions (ESS) is an automotive safety technology company that is developing innovative solutions to address a previously unidentified significant roadway safety problem: crashes involving disabled vehicles and their occupants. These crashes are growing in frequency and come with immense cost to individuals, families and society. The key issue: oncoming drivers often fail to notice disabled vehicles in time to avoid them.

Dramatically more intelligent and visible hazard/emergency lighting for disabled vehicles, such as ESS' new **Hazard Enhanced Lighting Package** ("**H.E.L.P.**"), can help prevent these crashes and keep stranded motorists safer. The H.E.L.P. solution offers faster emergency mode flash rates to more effectively capture the attention of drivers of oncoming vehicles – giving them more time to steer clear of disabled vehicles on or off the roadway ahead.

In effort to gauge consumer reaction to and interest in its H.E.L.P. solution, in September 2020 ESS enlisted J.D. Power & Associates to conduct a **consumer demand survey,** with a sample size of **1,023 people. NOTE: the survey H.E.L.P. is referred to as "Enhanced Emergency Lighting" (EEL).**

Please view the full results of the J.D. Power Study here.

Preparatory Materials Provided to Survey Respondents:

All respondents used the online Survey Monkey platform, and prior to taking the survey were presented the following statistical information uncovered in a recent study by Impact Research.

U.S. statistics involving low-conspicuity disabled vehicles are alarming, and getting worse:

- Nearly **72,000 people involved each year**
- **One person involved every seven minutes, 200 people each day**
- Nearly **15,000 people injured or killed each year**
- Approximately **$9 billion in annual cost to society**

Respondents of the J.D. Power survey also were asked to view this brief video created by ESS prior to answering the survey questions.

NOTE: The Impact Research study cited above defines three crash types where insufficient conspicuity of a disabled vehicle resulted in injury or death:

1. Moving vehicle strikes a nonmoving/disabled vehicle

2. Pedestrian (motorist who has exited their vehicle) or Good Samaritan providing aid is struck while tending to a disabled or stopped vehicle
3. Vehicle departs roadway and crashes unnoticed, and rescue is delayed significantly

Survey Questions:

1. Please watch this video and tell us your first reaction to the Enhanced Emergency Lighting feature in terms of being helpful in preventing / reducing accidents caused by disabled vehicles.
2. Please explain why you think the Enhanced Emergency Lighting feature would / wouldn't be helpful in preventing / reducing accidents caused by disabled vehicles.
3. Have you had (or approached) a disabled vehicle situation (e.g., changing a tire, out of gas / fuel, after an initial vehicle collision) and felt your safety was being compromised, and that others (i.e., primarily traffic approaching from the rear) couldn't see you?
4. Do you consider the Enhanced Emergency Lighting to be more or less effective at making disabled vehicles more noticeable than the standard hazard lights offered on today's vehicles?
5. How interested are you in having the Enhanced Emergency Lighting feature on your next vehicle?
6. If offered as an available factory installed option, how likely would you be to purchase the Enhanced Emergency Lighting feature on your next vehicle if it costs $250? (NOTE: Other tested prices included $350, $450, $150 and $50).
7. If the Enhanced Emergency Lighting feature wasn't factory equipped on your new vehicle purchase, would you consider buying it as a dealer-installed option?
8. The Enhanced Emergency Lighting feature can automatically notify vehicle traffic providers (e.g., Waze, Google Maps) about a disabled vehicle(s) and provide a notification in your vehicle's navigation / media screen to alert you that you are approaching a disabled vehicle ahead. How helpful would this advanced notification be at helping to prevent a collision with a disabled vehicle?

The JD Power & Associates survey quantified a statistically significant **sample of the general population's interest level in ESS's new Hazard Enhanced Lighting Package solution** (referred to as Enhanced Emergency Lighting in the survey) that utilizes an increased flash rate between 4-6 cycles per second.

The study gauged reactions to the provided video, perceived effectiveness of enhanced emergency lighting in comparison to standard hazard lights , as well as potential price points for the H.E.L.P. solution based on consumer interest level.

Key Findings

- Results showed a **"strong" to "very strong" interest level in enhanced emergency lighting** among all survey respondents.
- After watching the video:
    - 96% of all survey respondents thought Emergency Enhanced Lighting would be helpful in preventing / reducing crashes.

  - 67% (685) of all respondents were very interested in equipping Enhanced Emergency Lighting on their next vehicle.

- **63% (644) of respondents had experienced a disabled vehicle situation where they felt their safety was compromised**.
  - Of this subgroup, **83% (535)** felt the video demonstration showed H.E.L.P. could be very **helpful in reducing the possibility of these types of crashes.**
  - In addition, of this subgroup 77% (496) people were at least very interested in equipping Enhanced Emergency Lighting on their next vehicle.
- Of the **379 respondents who had <u>not</u> experienced a disabled vehicle situation:**
  - 71% (269) thought the video showed H.E.L.P. could be very helpful in reducing these types of crashes.
  - 48% were at least very interested in equipping Enhanced Emergency Lighting on their next vehicle.
- 90% (920) of all survey respondents felt Enhanced Emergency Lighting is more effective than today's standard hazard lights.

<u>Pricing Sensitivities:</u>

- When focusing only on acceptors ("very interested" or "extremely interested"), 67% would consider purchasing the Enhanced Emergency Lighting feature if priced at $250.
- Among respondents who are considered intenders (at least "somewhat interested"), 56% would consider purchasing the Enhanced Emergency Lighting feature if priced at $250.

<u>Interest as Dealer-Installed Option:</u>

- Consideration for Enhanced Emergency Lighting as a dealer-installed option was not as strong as a scenario where it would be offered as a factory-installed feature, as represented by 20% drop from respondents who would said they would definitely consider purchasing the safety feature.
- When asked about a scenario where the Enhanced Emergency Lighting feature was only available as a dealer-installed option, just 32% (327) people said they probably would buy the safety feature.

<u>Digital Notification:</u>

- In terms of whether or not an advanced digital notification/warning would be helpful in preventing a collision with a disabled vehicle along the road ahead, the majority of the respondents (75%) agreed it would at least be very helpful.
- Among respondents who had experienced or approached a disabled vehicle, there was a much stronger appreciation for advance notification when approaching a disabled vehicle situation (81% versus 66%).

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